IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of:	)	
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WALTERS, THOMAS H.	)	**Attorney Docket No.:**
	)	**702.345**
Serial No.: 10/821,423	)	
	)	
Filed: April 9, 2004	)	**Group Art Unit No. 3661**
	)	
SYSTEMS AND METHODS WITH INTEGRATED GPS AND DEAD RECKONING CAPABILTIES	)	**Examiner: NGUYEN, C. H.**

REPLACEMENT APPEAL BRIEF

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APPELLANT'S REPLACEMENT BRIEF ON APPEAL

In response to the Notice of Non-Compliant Brief dated November 20, 2007, and the Advisory Action dated June 22, 2007, Appellant's Replacement Brief on Appeal in accordance with 37 C.F.R. § 41.37 is hereby submitted. The Examiner's rejections of claims 1-45 are herein appealed, and allowance of said claims is respectfully requested.

A one-month extension of time accompanies this Replacement Appeal Brief. The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment, to Account No. 501-791.

Respectfully submitted,

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Following are the requisite statements under 37 C.F.R. § 41.37:

I. Real Party in Interest

Thomas H. Walters, Cliff A. Pemble, and Min H. Kao are the inventors of the claimed invention. The inventors assigned the above-referenced application to Garmin Ltd., the Real Party in Interest.

II. Related Appeals and Interferences

There are no related appeals or interferences, known to the Appellants, which may directly affect or be directly affected by the Board's decision in the pending appeal.

III. Status of Claims

Claims 1-45 stand rejected and appealed.

IV. Status of Amendments

All amendments submitted by the Appellant have been entered.

V. Summary of Claimed Subject Matter

The claimed embodiments of the present invention are directed to navigation. More specifically, the present invention is a device, system, and method combining triangulation positioning functionality and dead reckoning positioning functionality.

Claim 1 claims a method for navigation and recites "providing a first device including a triangulation positioning functionality", Line 18 of Page 17 through Line 2 of Page 18, Lines 1-3 of Page 21, Item 510 of Figure 5A, and Step 610 of Figure 6; "providing a second device to communicate with the first device, but separate from the first device, the second device including a dead reckoning positioning functionality", Line 18 of Page 17 through Line 2 of Page 18, Lines 13-15 of Page 18, Lines 5-7 and Lines 22-24 of Page 21, Item 502 of Figure 5A, and Step 620 of Figure 6; and "resolving a position of one of the first and the second devices, wherein resolving the position includes using the dead reckoning positioning functionality and the triangulation positioning functionality", Lines 5-11 of Page 36, Step 630 of Figure 6, and Step 740 of Figure 7.

Claim 10 claims a method for navigation and recites "providing a first mobile device including a triangulation positioning functionality", Line 18 of Page 17 through Line 2 of Page 18, Lines 1-3 of Page 21, Item 510 of Figure 5A, and Step 710 of Figure 7; "providing a second mobile device to communicate with the first mobile device and physically separable therefrom, the second mobile device including a dead reckoning functionality that includes an orientation component and a distance detection component", Line 18 of Page 17 through Line 2 of Page 18, Lines 13-15 of Page 18, Lines 5-7 and Lines 22-24 of

Page 21, Item 502 of Figure 5A, and Step 720 of Figure 7; "resolving the position of one of the first and the second mobile devices using the triangulation positioning functionality when the triangulation positioning functionality is available", Lines 5-8 of Page 36 and Step 730 of Figure 7; "resolving the position of one of the first and the second mobile devices using the dead reckoning positioning functionality to complement resolving the position with the triangulation positioning functionality when the triangulation positioning functionality is interrupted", Lines 8-11 of Page 36, Step 630 of Figure 6, and Step 740 of Figure 7; and "resolving the position of one of the first and the second mobile devices using the dead reckoning positioning functionality when the triangulation positioning functionality is unavailable", Line 25 of Page 36 through Line 2 of Page 37, Step 630 of Figure 6, Step 740 of Figure 7, and Step 840 of Figure 8.

Claim 15 claims a method for navigation in a vehicle and recites "tracking a location of a first device using a triangulation positioning functionality", Lines 5-8 of Page 36, Item 502 of Figure 5A, and Step 730 of Figure 7; and "using a second device to communicate with the first mobile device, that is physically separable therefrom, and that includes a distance determination component and an orientation component, to continue tracking the location of one of the first and second devices", Lines 5-7 and Lines 22-24 of Page 21, Lines 8-11 of Page 36, Line 25 of Page 36 through Line 2 of Page 37, Item 510 of Figure 5A, Step 630 of Figure 6, Step 740 of Figure 7, and Step 840 of Figure 8.

Claim 23 claims a navigation system and recites "a first mobile device including a dead reckoning positioning component", Lines 13-15 of Page 18, Item 502 of Figure 5A; "a

second mobile device removably situated in the first mobile device including a triangulation positioning functionality in communication with the first mobile device", Lines 1-3 of Page 20, Lines 5-7 and Lines 22-24 of Page 21, Item 510 of Figure 5A; and "wherein the first and the second mobile devices resolve a position of one of the first and the second devices using the dead reckoning component of the first mobile device to supplement resolving the position with the triangulation positioning functionality in the second mobile device", Lines 8-11 of Page 36, Step 630 of Figure 6, and Step 740 of Figure 7.

Claim 31 claims a vehicle navigation system and recites "a first device having a processor, a memory, and a transceiver to communicate with one another, the first device including a positioning functionality", Lines 3-5 of Page 18, Lines 16-18 of Page 19, and Items 502, 504, 506, and 508 of Figure 5A; "a second device having a processor, a memory, and a transceiver to communicate with one another, the second device including a positioning functionality", Lines 3-5 of Page 18, Lines 10-12 of Page 22, and Items 510, 512, 514, and 516 of Figure 5A; "wherein the transceivers in the first and the second devices transmit navigation related data wirelessly between the first and the second devices", Lines 18-27 of Page 19; and "wherein the first and the second devices cooperate to resolve a position of the first and the second devices", Lines 8-11 of Page 36, Step 630 of Figure 6, and Step 740 of Figure 7.

Claim 37 claims a method for navigation in a vehicle and recites "tracking a location of a first device using a triangulation positioning functionality", Lines 5-8 of Page 36, Item 502 of Figure 5A, and Step 730 of Figure 7; "using a second device that communicates

with the first device and includes a cradle for the first device, a distance determination component, and an orientation component, to continue tracking the location of one of the first and second devices", Lines 5-7 and Lines 22-24 of Page 21, Lines 8-11 of Page 36, Line 25 of Page 36 through Line 2 of Page 37, Item 510 of Figure 5A, Step 630 of Figure 6, Step 740 of Figure 7, and Step 840 of Figure 8; and "using software operable on the first and the second devices for selecting between using the first and the second devices", Lines 7-12 of Page 38.

Thus, various claimed embodiments of the present invention combines triangulation positioning functionality and dead reckoning positioning functionality for use in navigation.

Appellants note that the page and line numbers cited above are for reference purposes only and should not be taken as a limitation on the support for, nor scope of, the claimed subject matter. Support for the claimed subject matter may be found throughout the specification and drawings and the page and line numbers cited above merely refer to exemplary portions of the specification.

VI. Grounds of Rejection to be Reviewed on Appeal

- The Examiner's rejection of claims 1 and 10 under 35 U.S.C. 103(a) as being unpatentable over Turetzky (U.S. Patent No. 6,529,82) in view of Hakala (U.S. Patent No. 6,452,544).
- The Examiner's rejection of claim 5 under 35 U.S.C. 103(a) as being unpatentable over Turetzky in view of Hakala.
- The Examiner's rejection of claims 11 and 33 under 35 U.S.C. 103(a) as being unpatentable over Turetzky in view of Hakala in further view of Smith (U.S. Patent No. 6,374,179).
- The Examiner's rejection of claim 12 under 35 U.S.C. 103(a) as being unpatentable over Turetzky in view of Hakala.
- The Examiner's rejection of claims 15, 16, and 23 under 35 U.S.C. 103(a) as being unpatentable over Turetzky in view of Hakala in further view of DeLorme (U.S. Patent No. 6,321,158).
- The Examiner's rejection of claims 17 and 41-45 under 35 U.S.C. 103(a) as being unpatentable over Turetzky in view of Hakala.
- The Examiner's rejection of claims 20, 21, and 37-38 under 35 U.S.C. 103(a) as being unpatentable over Turetzky in view of Hakala.
- The Examiner's rejection of claim 26 under 35 U.S.C. 103(a) as being unpatentable over Turetzky in view of Hakala in further view of DeLorme.

- The Examiner's rejection of claim 29 under 35 U.S.C. 103(a) as being unpatentable over Turetzky in view of Hakala in further view of DeLorme.
- The Examiner's rejection of claim 30 under 35 U.S.C. 103(a) as being unpatentable over Turetzky in view of Hakala in further view of DeLorme.
- The Examiner's rejection of claim 31 under 35 U.S.C. 103(a) as being unpatentable over Turetzky in view of Hakala in further view of DeLorme.

VII. Argument

Obviousness

Obviousness can be a problematic basis for rejection because the Examiner, in deciding that a feature is obvious, has the benefit of the applicant's disclosure as a blueprint and guide. In contrast, one with ordinary skill in the art would have no such guide, in which light even an exceedingly complex solution may seem easy or obvious. Furthermore, once an obviousness rejection has been made, the applicant is in the exceedingly difficult position of having to prove a negative proposition (i.e., non-obviousness) in order to overcome the rejection.

For these reasons, the law places upon the Examiner the initial burden of establishing a *prima facie* case of obviousness. If the Examiner fails to establish the requisite *prima facie* case, the rejection is improper and will be overturned. *In re Rijckaert,* 9 F.3d 1531, 1532, 28 U.S.P.Q.2d 1955 (Fed. Cir. 1993). Only if the Examiner's burden is met does the burden shift to the Applicant to provide evidence to refute the rejection.

In meeting this initial burden, the Examiner "cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention." *In re Fine,* 837 F.2d 1071, 1075, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988). Thus, the Examiner is required to perform the "critical step" of casting his or her mind back to the time of invention, to consider the thinking of one of ordinary skill in the art, guided only by the prior art references and the then-accepted wisdom in the field. *See, e.g., W. L. Gore & Assoc., Inc. v. Garlock, Inc.,* 721 F.2d 1540, 1553, 220 U.S.P.Q. 303 (Fed. Cir. 1983).

Three criteria must be satisfied by the Examiner in order to establish a prima facie case of obviousness: (1) there must be some reasoning, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or combine their teachings; (2) there must be a reasonable expectation of success; and (3) the combination of references must teach or suggest all the claim limitations. *See* MPEP § 706.02(j), *citing In re Vaeck,* 947 F.2d 488, 493, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991).

Rejections on obviousness grounds also cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness. *In re Kahn,* 441 F.3d 977, 988, 78 U.S.P.Q.2d 1329 (Fed. Cir. 2006). The factual inquiry performed by the Examiner in issuing an obviousness rejection must be thorough and searching. *McGinley v. Franklin Sports, Inc.,* 262 F.3d 1339, 1351-52, 60 U.S.P.Q.2d 1001 (Fed. Cir. 2001). The prohibition against conclusory examination is as much rooted in the Administrative Procedure Act, which ensures due process and non-arbitrary decision-making, as it is in § 103. *In re Kahn*, 441 F.3d at 988.

"As is clear from cases such as *Adams*, a patent composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art". *KSR International Co. v. Teleflex Inc.*, 127 S.Ct. 1727 (2007) (Referring to *United States* v. *Adams*, 383 U. S. 39, 40 (1966)). Rather, there must be some "reason to combine the known elements in the fashion claimed by the patent at

issue. To facilitate review, this analysis should be made explicit". *Id.* (Citing *In re Kahn*, 441 F. 3d 977, 988 (CA Fed. 2006) ("[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness")).

Consequently, an Examiner's mere identification in the prior art of each individual element claimed is insufficient to defeat the patentability of a claimed invention without a proper reasoning to combine or modify the elements. *In re Rouffet,* 149 F.3d 1350, 1357, 47 U.S.P.Q.2d 1453 (Fed. Cir. 1998). The fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Gordon*, 733 F.2d 900, 902, 221 USPQ 1125 (Fed. Cir. 1984).

In presenting the reasoning to combine prior art references, the Examiner may not resort to broad and conclusory statements; as such statements are not "evidence" of anything. *In re Kotzab,* 217 F.3d 1365, 1370, 55 U.S.P.Q.2d 1313 (Fed. Cir. 2000). The reasoning to make the claimed combination must be found in the prior art, not in the applicant's disclosure. *In re Vaeck,* 947 F.2d at 490. If the Examiner's proposed combination renders the prior art invention unsatisfactory for its intended purpose, or changes its principal of operation, there can be no reasoning to form the combination—and thus no *prima facie* case of obviousness. *See* MPEP § 2143.01*; In re Gordon*, 733 F.2d at 902.

In the present case, the cited references fail to teach each and every claim limitation. Furthermore, there exists no reasoning to combine the references in the proposed manner since the references themselves teach away from such a combination. Thus, the Examiner has failed to establish a *prima facie* case of obviousness, and the present rejections cannot be sustained.

i. Claims 1 and 10

Claim 1 recites "providing a first device including a triangulation positioning functionality", "providing a second device … separate from the first device, the second device including a dead reckoning positioning functionality", and "resolving a position of one of the first and the second devices, wherein resolving the position includes using the dead reckoning positioning functionality and the triangulation positioning functionality". Claim 10 recites "providing a first mobile device including a triangulation positioning functionality" and "providing a second mobile device to communicate with the first mobile device and physically separable therefrom, the second mobile device including a dead reckoning functionality that includes an orientation component and a distance detection component".

Turetzky's dead reckoning system is integral to his GPS enabled device and the two are simply not physically separable. Therefore, Turetzky fails to teach two separate devices working together to resolve a position using both triangulation and dead reckoning. Hakala teaches only a single GPS navigation device. Hakala is completely void of any

suggestion of dead reckoning functionality at all. Therefore, neither Turetzky nor Hakala suggests two separate devices, one with triangulation functionality and one with dead reckoning functionality, as claimed in claim 1.

Furthermore, the prior art references made of record do not supply nor support any reason to make the Examiner's proposed modification. The Examiner's asserted reasoning is "to provide a claimed method with using both a dead reckoning device, and a triangulation positioning device to get a location of those devices since a user can make a selection of obtained results". Page 5 of the April 5, 2007 Office Action. Such reasoning only supports Turetzky's integration of both devices; it does not speak to separate devices, as claimed.

In fact, Turetzky actually teaches a preference to combine multiple components on one integrated circuit. *See*, for example, column 4, lines 45-51; *See also* column 5, lines 31-48. Since Hakala only teaches a single navigation device, Hakala does not even teach enough to be pertinent to this prong of a *prima facie* case of obviousness. Thus, no combination of Turetzky and/or Hakala discloses, suggests, or makes obvious "providing a first device including a triangulation positioning functionality" and "providing a second device to communicate with the first device, but separate from the first device, the second device including a dead reckoning positioning functionality", as claimed in claim 1, or "providing a first mobile device including a triangulation positioning functionality" and "providing a second mobile device to communicate with the first mobile device and physically separable therefrom, the second mobile device including a dead reckoning

functionality that includes an orientation component and a distance detection component" as claimed in claim 10.

In response to the above arguments, the Examiner asserts that it "is not an inventive concept to put 2 devices together or separate", emphasis removed, and cites *In re Larson*, *In re Fridolph*, and *In re Lockhart*. Pages 2-3, of the April 5, 2007 Office Action. However, those cases dealt with the opposite question, namely the patentability of integrating previously separate devices.

Furthermore, the Examiner's reliance on such case law is inappropriate where the limitation is critical. *See* MPEP §2144.04. That is the case here. There is a critical advantage to separating triangulation and dead reckoning functionality. Specifically, such an advancement allows the two to be used independently, when desired, but still cooperate to resolve a location, as claimed. For example, dead reckoning devices are typically sensitive to mounting issues, and may even need to be integrated into a vehicle's onboard systems. Therefore, dead reckoning devices often require professional permanent installation. On the other hand, triangulation devices, such as GPS devices, can be made hand held and portable, such that they can operate independently of the vehicle. Thus, precisely because the two devices are separable, greater flexibility, functionality, and utility can be achieved. This is a critical advantage of the claimed embodiment, and therefore makes the claimed limitation critical to the claimed embodiment. Where the criticality of a specific limitation has been shown, "it would not be appropriate to rely solely on case law as the rationale to support an obviousness rejection". MPEP § 2144.04. Thus, the cited

case law does not support the Examiner's position and the Examiner's reliance thereon is inappropriate. As a result, the Examiner has failed to establish a *prima facie* case of obviousness and the present rejections cannot be sustained.

On page 4 of the May 25, 2007 Office Action, the Examiner defines "integral". Applicant acknowledges that Turetzky's dead reckoning system is integral to his GPS enabled device. Applicant is not claiming that the first and second devices are integral with each other. Quite the opposite. Applicant is claiming the two devices being "separate" or "physically separate", which is precisely what the prior art fails to teach.

The Examiner also asserts that the issue is "not whether a feature of one references can be bodily incorporated in the other [to] produce the subject matter claimed". Page 4 of the May 25, 2007 Office Action. However, if the Examiner's proposed combination renders the prior art invention unsatisfactory for its intended purpose, or changes its principal of operation, there can be no reason to form the combination—and thus no *prima facie* case of obviousness. *See* MPEP § 2143.01*; In re Gordon*, 733 F.2d 900, 902, 221 USPQ 1125 (Fed. Cir. 1984). Furthermore, "[a] prior art reference must be considered in its entirety, i.e., as a whole, ***including portions that would lead away from the claimed invention***", emphasis added. MPEP § 2141.02; *W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), *cert. denied*, 469 U.S. 851 (1984). Here, each prior art reference teaches integrating functionality into single unitary devices, rather than the claimed distribution of functionality. As the cited prior art explicitly teaches away from

the claimed invention, there can be no reason to combine them in any manner that would render the present claims obvious.

ii. Claim 5

Claim 5 recites "wherein providing the second device includes a rate gyro sensor". The Examiner acknowledges that neither "Turetzky nor Hakala teaches the portable device including a rate gyro". Page 5 of the April 5, 2007 Office Action. Rather, the Examiner asserts that "Hakala teaches the integrated compass that performs the claimed functions". *Id.* Applicant respectfully disagrees. A compass does not perform the same functions as the claimed rate gyro sensor. A compass provides an indication of orientation, but only when it is stable and not moving. Thus, a compass cannot provide any rate of turn information. A rate gyro provides only an indication of rate of turn, and cannot by itself indicate orientation. As a result, a compass and a rate gyro perform vastly different functions, in vastly different ways, providing vastly different results. It simply cannot be said that they are equivalents. Thus, no combination of Turetzky and/or Hakala discloses, suggests, or makes obvious "wherein providing the second device includes a rate gyro sensor", as claimed in claim 5.

iii. Claims 11 and 33

Claim 11 recites "wherein the method further includes using one of the triangulation positioning and dead reckoning positioning functionalities to calibrate the other one of the

triangulation positioning and dead reckoning positioning functionalities". Claim 33 recites "wherein the first and the second devices resolve the position using the GPS functionality while a GPS signal service is available to the first device, and wherein one of the first and the second devices resolve the position using the dead reckoning positioning functionality to supplement the GPS functionality when one of an interrupted, and unavailable GPS signal service is indicated by the first device". For example, dead reckoning positioning gradually looses accuracy as small errors eventually build upon each other causing significant error in positioning. A series of GPS position fixes, corresponding to dead reckoning sensor inputs, may be used to determine an actual distance traveled, and therefore aid in calibration of the dead reckoning sensors. On the other hand, triangulation positioning, such as GPS, may be intermittent in urban canyons. Thus, when a GPS fix is available, it may be used to update dead reckoning positioning, thereby calibrating the dead reckoning position.

The Examiner acknowledges that Turetzky does not disclose this limitation. *See* page 10 of the April 5, 2007 Office Action. In order the cure this defect, the Examiner asserted that Smith discloses such calibration. However, Smith merely teaches forming a "composite of position data". *See* Abstract. More specifically, Smith's "[p]osition service module 202 is disposed to receive position data and aggregate position data from each of a plurality of navigational position sources 208". Column 5, lines 55-58. Smith's "[p]osition service module 202 also functions to identify erroneous position data from [the sources] and eliminate such erroneous position data from the composite position data 240".

Column 5, lines 61-64. However, at no point does Smith actually teach or suggest ***calibrating*** any of his navigational position sources with data provided by any of his other sources. Rather, the most that can be said for Smith is that he teaches "discarding certain position data". Column 6, line 1. Such ***discarding*** is clearly not analogous to, nor suggestive of, ***calibration***. Therefore, Smith fails to disclose or suggest calibration, as described and/or claimed. As a result, no combination of Turetzky, Hakala, and/or Smith discloses, suggests, or makes obvious "wherein the method further includes using one of the triangulation positioning and dead reckoning positioning functionalities to calibrate the other one of the triangulation positioning and dead reckoning positioning functionalities", as claimed in claim 11, much less the limitations of claim 33.

In responding the above arguments, the Examiner asserts that Applicant is "admitting a task of checking and/or comparison has been made", emphasis removed, presumably with respect to Smith. Page 2 of the May 25, 2007 Office Action. While Applicant is unclear of any significance to such an admission, Applicant respectfully disagrees.

Rather than checking, comparing, or calibrating position data, Smith relies on assumptions of accuracy.

> For example, [Smith teaches] heading information from GPS unit 220 is significantly more accurate when the GPS unit is moving than when it is stationary. Therefore, if velocity of user node 108 drops to "0", then position service module 202 should defer to compass 224 heading position data, since heading position data from GPS unit 220 can be erroneous. Conversely, at higher speeds, heading position data from GPS unit 220 is significantly more accurate than heading position data from compass 224.

> Plurality of navigational position sources can also generate their own error information which can include, but is not limited to degree of confidence, resolution, accuracy, and the like. Column 6, lines 2-14.

Thus, as discussed above, Smith merely teaches ***discarding*** suspect or erroneous data, such as discarding GPS derived heading data when stationary, rather than using one source to ***calibrate*** another, as claimed. Therefore, Applicant does not concede that Smith teaches any comparison, much less actual ***calibration***. As the cited prior art fails to teach each claim limitation, the Examiner has failed to establish a *prima facie* case of obviousness.

iv. Claim 12

Claim 12 recites "retrieving navigation related data from a memory of the second mobile device and displaying the navigation related data on an integral display of the first mobile device". Claim 12 depends from claim 10. Thus, claim 12 not only requires the first and second device to be separable, but also requires that the second, dead reckoning device store navigation data and that the first, triangulation device display the navigation data. Thus, not only are GPS and dead reckoning functions separated, so too are the storage and display of navigation data.

Turetzky discloses no such functionality. Turetzky does not even suggest the possibility of storing navigation data in one device and displaying that data on another, separate device. Hakala, on the other hand, teaches displaying navigation data on a head mounted display, which has no triangulation functionality. As discussed above, Hakala is

completely void of any suggestion of any dead reckoning functionality. Indeed, the Examiner can only assert that it would have been obvious, without providing any reasoning supporting that assertion. *See* Page 5 of the April 5, 2007 Office Action. However, such broad and conclusory statements are not "evidence" of anything. *In re Kotzab,* 217 F.3d at 1370. As a result, no combination of Turetzky and/or Hakala discloses, suggests, or makes obvious "retrieving navigation related data from a memory of the second mobile device and displaying the navigation related data on an integral display of the first mobile device", as claimed in claim 12.

v. Claims 15, 16, and 23

Claim 15 recites "tracking a location of a first device using a triangulation positioning functionality" and "using a second device to communicate with the first mobile device, that is physically separable therefrom, and that includes a distance determination component and an orientation component". Claim 16 further requires "wherein the method further includes operably coupling the first and the second devices to communicate with one another in a single vehicle". Thus, as in claims 1 and 10, claim 15 requires two physically separable units, one with triangulation capability and another with dead reckoning capability. Claim 16 expands on this and explicitly requires the two devices to communicate with one another in a single vehicle. Claim 23 recites "a first mobile device including a dead reckoning positioning component" and "a second mobile device removably situated in the first mobile device including a triangulation positioning

functionality in communication with the first mobile device".

As discussed above with respect to claim 1, Turetzky does not disclose two physically separable units, able to communicate with each other, one having triangulation capability and another having dead reckoning capability. As also discussed above, Hakala simply fails to teach any dead reckoning functionality.

DeLorme discloses a GPS receiver used ***interchangeably*** with a dead reckoning system, rather than together as claimed. Specifically, DeLorme's PDA device can accept ***either*** a GPS system or a dead reckoning system, but not both. Therefore, DeLorme's GPS system simply cannot communicate with his dead reckoning system, as required by the claim limitations. In fact, because his GPS system and his dead reckoning system both use the same port, which only one may occupy at a time, DeLorme actually ***teaches away*** from using his GPS system and dead reckoning system together. As a result, no combination of Turetzky, Hakala, and/or DeLorme discloses, suggests, or makes obvious these claim limitations.

vi. Claims 17 and 41-45

Claim 17 recites "wherein the handheld, portable second device includes a cradle for the first device". Claim 17 depends from claim 15, and therefore claim 17 requires that the dead reckoning device provide a cradle for the triangulation device. Claim 41 recites "wherein the first device is housed in a first housing and the second device is housed in a second housing separable from the first housing". Claim 42 recites "wherein the second

device is removably situated in the first device". Claim 43 recites "wherein the first device is removably situated in the second device". Claim 44 recites "wherein the second device provides a cradle for the first device". Claim 45 recites "wherein the first device provides a cradle for the second device".

The Examiner fails to specifically address claim 17. The Examiner addresses claims 41-45 by merely asserting that the prior art teaches "that the above devices can be separated, and they may use cradles", emphasis removed. Page 5 of the April 5, 2007 Office Action. However, such broad and conclusory statements are not "evidence" of anything. *In re Kotzab,* 217 F.3d at 1370.

In fact, the Examiner admits, at least with regard to claim 1, that the prior art fails to teach the devices being separate. *See* pages 2-4 of the April 5, 2007 Office Action. For example, "Turetzky et al. do not expressly disclose that the second device communicating with the first device, said 2nd device is separate from the first device", emphasis removed. Page 4 of the April 5, 2007 Office Action.

In fact, none of the prior art references suggest any cradling, much less in the manner claimed. Rather, prior art cradles or mounts are typically simple pieces of metal and/or plastic who's sole function is to physically support a device. Moving positioning functionality to the cradle or mount is one of the novel features of the claimed embodiment of the present invention. This feature is ***wholly absent*** from any of the prior art references made of record. As a result, no combination of Turetzky and/or Hakala discloses, suggests, or makes obvious these claim limitations.

vii. Claims 20, 21, and 37-38

Claims 20 and 38 each recite "wherein selecting between using the first and the second devices includes resolving which of the first and the second devices is providing a better set of position data". Claims 21 and 39 each recite "resolving whether the first device is receiving triangulation positioning signals", "resolving whether the second device is receiving triangulation positioning data", and "resolving whether either of the first and the second devices are producing dead reckoning position data". Claim 37 recites "tracking a location of a first device using a triangulation positioning functionality", "using a second device that communicates with the first device and includes a cradle for the first device, a distance determination component, and an orientation component", and "using software operable on the first and the second devices for selecting between using the first and the second devices".

Neither Turetzky nor Hakala suggests any evaluation of whether a triangulation device is providing better data than a dead reckoning device, or visa versa. In fact, the Examiner fails to directly address these limitations at all. Thus, no combination of Turetzky and/or Hakala discloses, suggests, or makes obvious "wherein selecting between using the first and the second devices includes resolving which of the first and the second devices is providing a better set of position data", as claimed in claims 20 and 38, much less the limitations of claims 21 and 39. Furthermore, as discussed above, the prior art fails to teach the claimed first and second devices, and therefore likewise fails to render obvious "selecting between using the first and the second devices", as claimed in claim 37.

viii. Claim 26

Claim 26 recites "wherein the first mobile device further includes a triangulation positioning functionality, and the second device further includes a dead reckoning positioning component". Since claim 26 depends from claim 23, claim 26 actually requires both devices to include both triangulation and dead reckoning functionality. Neither Turetzky, Hakala, nor DeLorme disclose two devices, communicating with each other that each include both triangulation and dead reckoning functionality. While Turetzky does teach one device with both GPS and dead reckoning capability, Turetzky fails to teach two such devices communicating and cooperating to resolve a location. As a result, no combination of Turetzky, Hakala, and/or DeLorme discloses, suggests, or makes obvious the limitations claimed in claim 26.

ix. Claim 29

Claim 29 recites "wherein the second mobile device is removably, physically interfaced to the first mobile device". As discussed above, Turetzky's GPS receiver is integral with his dead reckoning sensor, and are therefore not "removably, physically interfaced" to each other. As also discussed above, Hakala teaches no dead reckoning device. Finally, as discussed above, DeLorme's GPS system is interchangeable with his dead reckoning system, and therefore they are not interfaced with each other at all. As a result, no combination of Turetzky, Hakala, and/or DeLorme discloses, suggests, or makes obvious the limitations claimed in claim 29.

x. Claim 30

Claim 30 recites "wherein the first and second mobile devices are wirelessly interfaced with one another". As discussed above, Turezky's GPS receiver is integral with his dead reckoning sensor, and therefore not "wirelessly interfaced with one another". As also discussed above, Hakala teaches no dead reckoning device. Also as discussed above, DeLorme's GPS system is interchangeable with his dead reckoning system, and therefore they are not interfaced with each other at all. As a result, no combination of Turetzky, Hakala, and/or DeLorme discloses, suggests, or makes obvious the limitations claimed in claim 30.

xi. Claim 31

Claim 31 recites "a first device having a processor, a memory, and a transceiver … including a positioning function", "a second device having a processor, a memory, and a transceiver to communicate with one another, the second device including a positioning functionality", "wherein the transceivers in the first and the second devices transmit navigation related data wirelessly between the first and the second devices", and "wherein the first and the second devices cooperate to resolve a position of the first and the second devices". As discussed at length above, no combination of Turetzky, Hakala, and/or DeLorme discloses, suggests, or makes obvious two separate positioning devices that wirelessly communicate with one another and cooperate to resolve a position, as claimed in claim 31. Specifically, as discussed at length, DeLorme's two positioning devices are

interchangeable, and do not ***cooperate*** with each other at all. As a result, no combination of Turetzky, Hakala, and/or DeLorme discloses, suggests, or makes obvious the limitations claimed in claim 31.

VIII. Conclusion

The Examiner failed, with regard to the rejection of the pending claims under 35 U.S.C. §103(a), to establish the requisite *prima facie* case of obviousness because the cited prior art fails to teach each and every claim limitation. Furthermore, the cited prior art actually teaches away from the Examiner's proposed combination, and therefore there can be no reasoning to combine the references. Consequently, the Examiner failed to establish the requisite *prima facie* case of obviousness, and the rejections under 35 U.S.C. § 103 cannot be sustained and must be overturned.

Accordingly, reversal of the Examiner's rejections is proper, and such favorable action is solicited.

Respectfully submitted,

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VIII. Claims Appendix

1. A method for navigation, comprising:

providing a first device including a triangulation positioning functionality;

providing a second device to communicate with the first device, but separate from the first device, the second device including a dead reckoning positioning functionality; and

resolving a position of one of the first and the second devices, wherein resolving the position includes using the dead reckoning positioning functionality and the triangulation positioning functionality.

2. The method of claim 1, wherein the first device is a handheld multifunction device selected from a group of a Personal Digital Assistant (PDA) enabled device and a cell phone enabled device.

3. The method of claim 2, wherein each of the group of a Personal Digital Assistant (PDA) enabled device and a cell phone enabled device includes providing a Personal Digital Assistant (PDA) enabled device and a cell phone enabled device has an integrated compass.

4. The method of claim 1, wherein providing the first device including a triangulation positioning functionality includes using a handheld GPS enabled device.

5. The method of claim 1, wherein providing the second device includes a rate gyro sensor.

6. The method of claim 5, wherein providing the second device includes an accelerometer sensor.

7. The method of claim 1, wherein providing the first and second devices includes providing first and second devices that communicate navigation related data between each other wirelessly using a communication technology selected from the group of infra-red signaling, cellular technology, Bluetooth technology, and microwave technology.

8. The method of claim 7, wherein providing a first device includes providing a first device having an integral display, and wherein the method further includes using the first device to display and to track a movement of one of the first and the second devices.

9. The method of claim 1, wherein the method further includes performing a route calculation using the first device.

10. A method for navigation, comprising:

providing a first mobile device including a triangulation positioning functionality;

providing a second mobile device to communicate with the first mobile device and physically separable therefrom, the second mobile device including a dead reckoning functionality that includes an orientation component and a distance detection component;

resolving the position of one of the first and the second mobile devices using the triangulation positioning functionality when the triangulation positioning functionality is available;

resolving the position of one of the first and the second mobile devices using the dead reckoning positioning functionality to complement resolving the position with the triangulation positioning functionality when the triangulation positioning functionality is interrupted; and

resolving the position of one of the first and the second mobile devices using the dead reckoning positioning functionality when the triangulation positioning functionality is unavailable.

11. The method of claim 10, wherein the method further includes using one of the triangulation positioning and dead reckoning positioning functionalities to calibrate the other one of the triangulation positioning and dead reckoning positioning functionalities.

12. The method of claim 10, wherein the method further includes retrieving navigation related data from a memory of the second mobile device and displaying the navigation related data on an integral display of the first mobile device.

13. (Previously Presented) The method of claim 12, wherein retrieving navigation related data from a memory of the first mobile device includes retrieving navigation related data selected from the group of a number of waypoints, a planned route, and points of interest.

14. The method of claim 13, wherein retrieving navigation related data for points of interest includes retrieving points of interest selected from the group of geographical points of interest, entertainment venues, dining venues, and lodging venues.

15. A method for navigation in a vehicle, comprising:

tracking a location of a first device using a triangulation positioning functionality; and

using a second device to communicate with the first mobile device, that is physically separable therefrom, and that includes a distance determination component and an orientation component, to continue tracking the location of one of the first and second devices.

16. The method of claim 15, wherein the method further includes operably coupling the first and the second devices to communicate with one another in a single vehicle.

17. The method of claim 15, wherein using a second navigation device to continue tracking the location includes using a handheld, portable second device, wherein the handheld, portable second device includes a cradle for the first device.

18. The method of claim 15, wherein using a second device to continue tracking the location includes communicatively coupling the first device to a dead reckoning positioning functionality in the vehicle, wherein the distance determination component includes at least one component selected from the group of an odometer and a speedometer, and wherein the orientation component includes at least one component selected from a differential wheel sensor, a rate gyro, and a compass.

19. The method of claim 15, wherein the method further includes software operable on the first and the second devices for selecting between using the first and the second devices.

20. The method of claim 19, wherein selecting between using the first and the second devices includes resolving which of the first and the second devices is providing a better set of position data.

21. The method of claim 20, wherein resolving which of the first and the second devices is providing a better set of position data includes:

resolving whether the first device is receiving triangulation positioning signals;

resolving whether the second device is receiving triangulation positioning data; and

resolving whether either of the first and the second devices are producing dead reckoning position data.

22. The method of claim 21, wherein tracking the location includes tracking a location of the first and the second device along a planned route and providing visual and audio route guidance.

23. A navigation system, comprising:

a first mobile device including a dead reckoning positioning component;

a second mobile device removably situated in the first mobile device including a triangulation positioning functionality in communication with the first mobile device; and

wherein the first and the second mobile devices resolve a position of one of the first and the second devices using the dead reckoning component of the first mobile device to supplement resolving the position with the triangulation positioning functionality in the second mobile device.

24. The navigation system of claim 23, wherein the dead reckoning component includes at least one component selected from a rate gyro and an accelerometer, and wherein the triangulation positioning functionality includes a GPS receiver.

25. The navigation system of claim 23, wherein the dead reckoning component includes at least one component selected from the group of an odometer, a speedometer, a differential wheel sensor communicatively coupled to at least one wheel of a vehicle, and a compass.

26. The navigation system of claim 23, wherein the first mobile device further includes a triangulation positioning functionality, and the second device further includes a dead reckoning positioning component.

27. The navigation system of claim 23, wherein the first mobile device includes a processor, a memory, and a set of computer executable instructions operable thereon to perform a route calculation.

28. The navigation system of claim 23, wherein the second mobile device is selected from the group of a multifunction PDA-enabled device and a multifunction cell phone-enabled device.

29. The navigation system of claim 23, wherein the second mobile device is removably, physically interfaced to the first mobile device.

30. The navigation system of claim 23, wherein the first and second mobile devices are wirelessly interfaced with one another.

31. A vehicle navigation system, comprising:

a first device having a processor, a memory, and a transceiver to communicate with one another, the first device including a positioning functionality;

a second device having a processor, a memory, and a transceiver to communicate with one another, the second device including a positioning functionality;

wherein the transceivers in the first and the second devices transmit navigation related data wirelessly between the first and the second devices; and

wherein the first and the second devices cooperate to resolve a position of the first and the second devices.

32. The system of claim 31, wherein the positioning functionality in the first device includes a GPS functionality and the positioning functionality in the second device includes dead reckoning positioning functionality, including a distance determination sensor and an orientation sensor.

33. The system of claim 32, wherein the first and the second devices resolve the position using the GPS functionality while a GPS signal service is available to the first device, and wherein one of the first and the second devices resolve the position using the dead reckoning positioning functionality to supplement the GPS functionality when one of an interrupted, and unavailable GPS signal service is indicated by the first device.

34. The system of claim 31, wherein the first device includes a display operable to display the position and a route to a desired destination, and wherein-the first device navigates the route to the desired destination using audio and visual guidance.

35. The system of claim 31, wherein the system further includes:

a remote server having a processor, a memory, and a transceiver to communicate with at least one of the first and the second devices.

36. The system of claim 35, wherein the remote server processor responds to a request from at least one of the first and the second devices by performing calculations on the navigation related data and transmitting results to at least one of the first and the second devices.

37. A method for navigation in a vehicle, comprising:

tracking a location of a first device using a triangulation positioning functionality;

using a second device that communicates with the first device and includes a cradle for the first device, a distance determination component, and an orientation component, to continue tracking the location of one of the first and second devices; and

using software operable on the first and the second devices for selecting between using the first and the second devices.

38. The method of claim 37, wherein selecting between using the first and the second devices includes resolving which of the first and the second devices is providing a better set of position data.

39. The method of claim 38, wherein resolving which of the first and the second devices is providing a better set of position data includes:

resolving whether the first device is receiving triangulation positioning signals;

resolving whether the second device is receiving triangulation positioning data; and

resolving whether either of the first and the second devices are producing dead reckoning position data.

40. The method of claim 39, wherein tracking the location includes tracking a location of the first and the second device along a planned route and providing visual and audio route guidance.

41. The method of claim 1, wherein the first device is housed in a first housing and the second device is housed in a second housing separable from the first housing.

42. The method of claim 1, wherein the second device is removably situated in the first device.

43. The method of claim 1, wherein the first device is removably situated in the second device.

44. The method of claim 1, wherein the second device provides a cradle for the first device.

45. The method of claim 1, wherein the first device provides a cradle for the second device.

IX. Evidence Appendix

None.

X. Related Proceedings Appendix

None.